

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number  
WO 2005/011830 A2

(51) International Patent Classification<sup>7</sup>: B01D

Santa Ana, CA 92705 (US). COOMBS, James, H.; 175  
San Leon Villa, Irvine, CA 92606 (US).

(21) International Application Number:  
PCT/US2004/023891

(74) Agent: MALLON, Joseph, J.; Knobbe, Martens, Olson  
& Bear, LLP, 2040 Main Street, Fourteenth Floor, Irvine,  
CA 92614 (US).

(22) International Filing Date: 22 July 2004 (22.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/489,978 25 July 2003 (25.07.2003) US

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

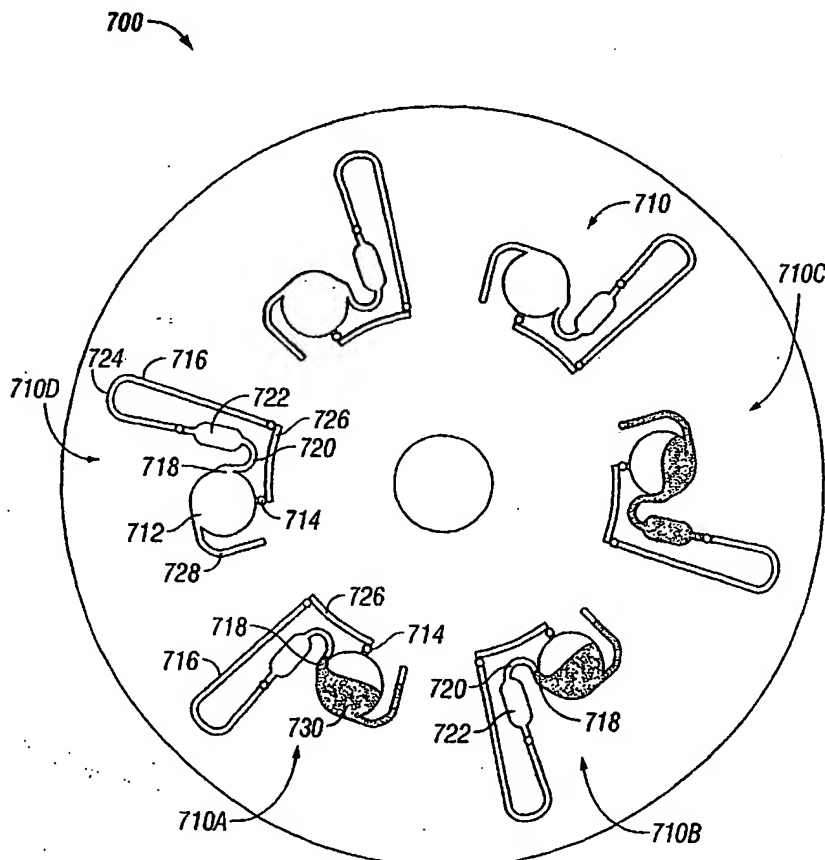
(71) Applicants (for all designated States except US): NA-  
GAOKA & CO., LTD. [JP/JP]; 7-18, Nishinomiya  
4-Chome, Nishinomiya-Shi, Hyogo 662-0934 (JP).  
BURNSTEIN TECHNOLOGIES, INC. [US/US]; 163  
Technology Drive, Suite 200, Irvine, CA 92618 (US).

(72) Inventors: KIDO, Horacio; 101 Main Street, Niland, CA  
92257 (US). NORTON, James, R.; 19321 Fisher Lane,

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: FLUIDIC CIRCUITS FOR SAMPLE PREPARATION INCLUDING BIO-DISCS AND METHODS RELATING  
THERE TO



(57) Abstract: A fluidic circuit for receiving a fluid and separating a component of a fluid from the fluid comprises a separation chamber for receiving the fluid, an air chamber in fluid communication with the separation chamber, and return channel in fluid communication with the separation chamber. In an advantageous embodiment, the fluidic circuit is subjected to a force, such as a centrifugal force, so that substantially all of the component of the fluid is moved to the return channel while substantially all remaining portions of the fluid are moved to the separation chamber.

WO 2005/011830 A2



ZW); Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *without international search report and to be republished upon receipt of that report*